

CENTRAL INTELLIGENCE AGENCY

REPORT

CD NO.

DATE DISTR. 18 May 1955

NO. OF PAGES 10

NO. OF ENCLS.
(LISTED BELOW)

SUPPLEMENT TO
REPORT NO. 25X1

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THIS IS UNEVALUATED INFORMATION

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4. The chief mechanic was in charge of organizational work. He received the code numbers and short designations of the development projects for civilian requirements from the technical administration and either turned them over to Grosse (fnu) of Section 19, planning and development, or discussed their coordination with other projects which were already being worked on and checked the profit margin.

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CONCLUSIONS

5. Concerning development orders for military equipment, the chief mechanic was informed only of the code numbers and cover designations. These projects were exclusively handled by the following persons who had been selected by the Ministry of Machine Construction:

Ing Harry Schwenke for wire telecommunications
Ing Paul Lange for transmitter and receiver units
Ing Willi Scholz for measuring and radar instruments and
Heinz Andreas for marine radio equipment

6. The following VP headquarters were in charge of development orders for VP equipment:

For the IV, a staff located on Schnellerstrasse, Berlin, with Lieutenant Colonel
 ✓ Harald Reimann, Major Giese (fmu), and First Lieutenant Hermann Hainke.
 For the VII, a staff in Guben with Major Nowke (fmu) and Captain Schell (fmu).
 For the VP, a staff in Rostock with Matthes (fmu) and Boer.

These headquarters submitted their requests for development projects to the Ministry of Interior - KVP, Schnellerstrasse, Berlin, attention Major Belz (fmu).

7. At the Ministry, the plans prepared by the three VP service branches were coordinated and discussed with representatives of the HVs. The project plans to include the number of units required and their purposes were then transmitted to the Central Office for Research and Techniques (ZFT) of the State Planning Commission. Ing Scheffler (fnu) was the only HV R-F-T representative at Schnellerstrasse.

A ZAPT comm. composed of ZAPT Chief, Professor Werner Langas chairman, Department Chief Georg Glawatsch and Assistant Otto (fms) discussed the development projects with Schwabe, F. Lange, Sebels and Andras from HV R-P-T. The development orders were then registered as confidential projects by the Department for Confidential Material at the Ministry of Machine Construction. Through channels, the reviewer in charge at HV R-P-T was informed of the cover or short designation of the project by which he could request the development order with the basic records.

2. Information on the following development activities at the major enterprises of the IV R-F-T was obtained officially or through former colleagues in the Office of Economics at the Ministry of Interior:

10. Flaschwitz Development Station of Funkwerk Leipzig

Ing Lix (fnu) was manager, ~~and~~ Dr Lange (fnu), a returnee from the USSR, and Dr Loeve were chiefs in charge of development. Equipment developed at the station included:

- u. Portable radio sets for two-way communication, cover designation Geologengerät I to III. The development was started in 1951 and completed in 1952. Mass production of the set had started with an experimental series of units at Funkwerk Leipzig. The 1955 plan included the production of 12,000 units for the KVP, 1,000 units for the VPL and 1,000 units for the VP See. Model I had a power of 1 W. Development orders for the models II and III were received in 1952. These versions had a power of 2 W and 3 W.

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respectively supplied by a pedal operated generator that had been developed especially for this purpose. Four type II and III units were turned over to the KVP to be tested. The tube line-up was frequently modified. RV 12 P 2000 type tubes were not suitable because of their complicated power supply. Later experiments were made with the Gnom series and the 6 type series. The leaf springs of sectional rod antennas frequently suffered from broken coil steel.

- b. Acoustic depth finder. Dr Lange had been working on this development project since 1952. In May 1954, the VP-Sag conducted experiments with the unit on the Baltic Sea. No information was available on the results obtained in these experiments. At Flagwitz, experiments were conducted on a pond located in the Deutsche Post area. Difficulties were encountered with the development of the underwater microphone (because the crystals produced by Funkwerk Leipzig failed) and with seaworthy cables.
- c. Detector for land mines. The device developed by Dr Lange in 1952 for a KVP engineer battalion was to operate by means of a loop searcher (Schleifensonde) and detect metal up to 1.5 m underground.
- d. Telephone interceptor. The development project, based on a former Wehrmacht device, was completed.
- e. DF unit with parabolic reflector. In 1953/1954 the instrument was allegedly tested on the wooden tower located in the Flagwitz plant area. The reflector had a diameter of 2.5 to 3 m and a range of about 30 km.

11. Sachsenwerk Radeberg

Viewoger (fmu) was manager of Sachsenwerk Radeberg and Ing Gerhard Megla was chief of development.

- a. In late 1952, Ing Megla received an order from the Office of Economics of the Ministry of Interior to supplement the East German telecommunication system by a decimeter network. The project had the code name "Spinne". Ing Wehbrauch (fmu), about 28, residing in Berlin Karlshof, was especially assigned by the Ministry of Interior to supervise the activities. The plans covered a circuit between Leipzig, Dresden and Chemnitz and towns on the Baltic Sea with radial connections to a central station on the Hugelberg hills east of Berlin. Leipzig Stahlbau (steel construction firm) was ordered to build 10 to 12 towers, 20 to 40 m high, according to the local conditions of their future locations.
- b. By order of the VHL and VP-Sag, Ing Megla was to develop an instrument for the identification friend or foe. No details were available.
- c. A research order for an ultra type radiator and an ultra type voice radio was received from the VP-Sag. No further information was obtained.
- d. Ing Megla was ordered to check the possibilities for a reproduction of the Decca system. He determined that the Decca system could not be reproduced, because the essential parts were not available.
- e. Other development activities included various link units for telephone communication and television relays lines. In 1953, Dr Megla planned to build link reflectors, 10 m² in size.

12. Funkwerk Dresden

Aumich (fmu) was plant manager and Kutzsche was chief of development. The development station, located in a former light bulb factory, reproduced Western equipment

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for radio cars and central transmitter and receiver stations. These instruments were installed on luggers of the ~~VF-800~~ and in motor and tractor stations (MTS) of the SSD, the ~~Railroad Police~~ and the Border Police. In order to fill the large requirements for these instruments, 12 million eastmarks had allegedly been allotted for the 1954 production.

- a. The development of an electronic computing machine by Ing Kutzsche was started in 1953. According to the August 1954 development reports, 30 percent of the project was completed. The instrument was equipped with Western tubes only. It was remembered that a shipment of 600 such tubes had arrived. Dr. ~~Walter Faltow~~ chief of the Research Department at the ~~VWB-Werk~~ *vier Elemente der Nachrichtentechnik, Teltow*, supplied a set of transistors for experimental purposes.
- b. Kutzsche (fnu) was in charge of a secret development project for a pulse code modulation system. In September 1954, a First Lieutenant of the Ministry of Interior, Harry Schenke, who was a specialist for wire communications at the HV R-F-T, Schiering (fnu), who was a representative of the Ministry of Machine Construction, Department for Vacuum Techniques, and Rothenburg (fnu), who was a technologist, frequently met to discuss difficulties encountered with the tubes.

13. Funkwerk Zittau Olbersdorf

began

In 1952, Ing Ziegler (fnu) the development of the ~~earliest~~ type miniature voice radio set. After an experimental series had been built, the production was discontinued because of difficulties with the power unit. The instrument was to be carried on the belt, similar to a cartridge pouch and had a range of 3 km. A flat battery with disc shaped elements was used as a power unit. The time of operation was only 20 to 25 minutes. Further difficulties occurred with the plastic casing which broke under stress. A metal casing was tested and found electrically unsuited. A whip type antenna frequently suffered from broken coil steel. It was thought that an American model would be obtained.

14. Funkwerk Labendorf

Ing Barlich (fnu) was chief of the plant. In 1952 Funkwerk Labendorf started, in cooperation with Funkwerk Koepenick, the development of an all-wave receiver, a very low frequency receiver and a distress call station.

15. Fernmeldewerk Leipzig

Boethel (fnu) was manager of the Leipzig Telecommunication Plant and Hubel (fnu) was chief of development. Between 1951 and June 1953, the plant developed a combined scrambling device and a corrector for telephone lines. The development project had been ordered by the KVF and was carried out under the supervision of Hubel. Twelve sets were produced. A sound generator produced a standard pitch which jammed the call and filtered out again at the receiver.

16. Condenser Plant in Gera

Dr. Hans Schals was chief of research and Haberstroh (fnu) who had previously worked at the Ministry of Interior was technical manager. The plant worked on the development of high frequency cores made of iron powder.

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17. Kermsdorf Ceramics Plant

Among other products, the plant produced Maniperm ~~ceramic~~ rings for loudspeakers. Field strengths of 600 Gauss were obtained.

18. Funkwerk Erfurt

Calibrating transmitters of the types LR 406 and LR 458 were being developed under the control of Neubauer (fnu), chief of development.

19. Funkwerk Koenig

Paul Baur was plant manager and Walter Heising was chief of the development stations. Only little information could be obtained on the activities of VSB Funkwerk Koenig, VSB Werk Paderborn, and VSB Werk fuer Signal u. Richtfunk, Treptow because these plants were mostly in direct contact with their customers. For the same reason, very little information could be obtained on the development of a collision preventing device. A production for the VPL was also being discussed. It was learned that a newly developed instrument failed during the experiments at Sassenitz in May and June 1954. As a result of defective condensers, the experimental model burned out completely and the GSD started investigations in this case. No information could be obtained on the origin and layout of reference instrument.

20. In early 1952 or 1953, an experimental model of a stabilized 1000 Mc. oscillator was allegedly mounted on a lugger and demonstrated for the Soviet Naval Register Office in Karlshorst. The model was rejected because it did not balance all motions of the boat. Difficulties affected the transmission of the balancing movements from the gyro control, because chain drive was used instead of shaft drive. The platform measured about 4 x 6 m. The experiments were allegedly cancelled.

21. Among Baur's colleagues, there were rumors of rocket launching bases. No information was obtained on the type and location of these alleged launching stations.

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1. Comment. For table of organization and personnel of HV R-F-T, see Annex 1.

2. Comment. For activities of the individual sections of the Main Department of Research and Development, see Annex 2. No information was obtained on the activities of Sections 4, 7 and 8.

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3. Comment: Throughout this report, the various Volkspolizei (VP) commands mentioned correspond roughly as follows: VWP = Army; VFL = Air; VP See = Navy.

4. Comment: Possibly identical with Dipl. Ing. Franz Hubl, a carrier frequency specialist.

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Annex 1

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Table of Organization and Personnel Plan of HV R-F-T, Status October 1954A. Structural Plan

| | Researchers | Typists |
|--|-------------|---------|
| HV chief and assistant | 2 | 2 |
| Cadre Department | 2 | 2 |
| Department of the chief dispatcher | 1 | 1 |
| Investment Department | 2 | 1 |
| Labor Department | 12 | 5 |
| Salon Department | 8 | 4 |
| Planning Department | 4 | 3 |
| Department of Economic Control | 2 | 2 |
| Department of Material Supply | 15 | 6 |
| Technical Administration I | 1 | 1 |
| Technical Administration II | 1 | 1 |
| Chief Mechanics Department | 1 | 1 |
| Research and Development Department | 6 | 1 |
| (Sections 1 to 9): | | |
| Section 1: wire communication techniques | | |
| Section 2: acoustics | | |
| Section 3: Broadcast and television | | |
| Section 4: measuring instruments | | |
| Section 5: transmitters | | |
| Section 6: vacuum techniques | | |
| Section 7: commercial developments | | |
| Section 8: ship equipment | | |
| Section 9: components | | |
| Department of Technology | 6 | 1 |
| (Sections 10 to 18): | | |
| Section 10: wire communications | | |
| Section 11: acoustics | | |
| Section 12: broadcast and television | | |
| Section 13: measuring instruments | | |
| Section 14: transmitters | | |
| Section 15: vacuum techniques | | |
| Section 16: commercial developments | | |
| Section 17: ship equipment | | |
| Section 18: components | | |
| Planning and Development Department | 4 | 2 |
| (Sections 19 to 24): | | |
| Section 19: planning and development | | |
| Section 20: scientific coordination | | |
| Section 21: patents and invention problems | | |
| Section 22: standardization | | |
| Section 23: conversion of machines | | |
| Section 24: quality control | | |
| Production Control Department | 1 | 1 |
| Production Department | 1 | 1 |
| Production Department | 11 | 2 |
| (Sections 25 to 34): | | |
| Section 25: wire communications | | |
| Section 26: Acoustics | | |
| Section 27: Broadcast and television | | |
| Section 28: measuring instruments | | |
| Section 29: transmitters | | |
| Section 30: vacuum techniques | | |
| Section 31: commercial developments | | |
| Section 32: marine equipment | | |
| Section 33: structural elements | | |
| Section 34: consumer goods | | |

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* As received. There is no indication of the difference in the two components.

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B. Personnel:

Chief of HV R-F-T:

~~Ing Adolf Hagemann, D.~~

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Assistant:

Prokes (fmu)

Chief of Cadre Department:

Naether (fmu)

Chief Dispatcher:

Engel (fmu),

Chief of Investment Depart:

Keil (fmu),

Chief Labor Department:

Firl, (fmu), correct and precise person, Saxonian

Chief of the Sales Depart:

Christoph (fmu),

Chief of Planning Department: Heinze (fmu)

Chief of Economic Control Department: Diplom Kaufmann Wanzki (fmu)

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Chief of Finance Department: Weiss (fmu),

Chief of Material Supply: H. Mueller,

Chief of Production: Scheffler (fmu).

Technical Manager:

Ing Albrecht (fmu),

Technical Manager:

~~Ing Albrecht~~

Chief of Production Dept: Ing Seidel (fmu),

Reviewers:

Section 1

Ing Schenke (fmu),

Sections 2, 3 and 4

Scholz (fmu),

Sections 5, 7 and 8:

Ing Lange,

Section 6:

Ing Schiering (fmu),

Section 9:

Ing Goette (fmu),

Sections 10 and 11:

Daniel (fmu),

Section 12:

Ing Kaprolat (fmu),

Sections 13 and 16:

Neuwirth (fmu),

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Section 15:

Rothenburg (fmu), 50

Section 16:

Neuwirth and Andreas

Section 17:

Andreas

Section 18:

Dipl Ing Schulz (fmu),

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Sections 20 and 21:

Knospe (fmu),

Section 22:

(this section with 50 to 60 persons was stationed in Leipzig))

Section 23:

vacant

Section 24:

Waechter (fmu),

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Section 25:

Schmiedehaus (fmu),

Sections 26 and 27:

Ing Franke (fmu).

Section 28:

Mehlich (fmu),

Section 29:

Schmidt (fmu),

Section 30:

Ing Roehr (fmu)

Section 31:

Scheffler and Seidel

Section 32:

Willing (fmu),

Section 33:

Brauer (fmu),

Section 34:

Seidel and Prokes

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Annex 2

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Activities of the Sections 1, 2, 3, 5, 6, and 9 of the Department for Research and Development

Section 1. Wire Communication Equipment:

Hand generator for field telephones: The project had been ordered by the VP Sea and the VPL in 1951 and was completed in March 1954. Bartsch (fnu) of the Fernmeldewerk Arnstadt was in charge of the development. The production of the unit was started at Fernmeldewerk Nordhausen. Because of difficulties encountered with the crank unit and the bell, a reinforcement of the shaft from 3mm to 6mm were required. The generator was smaller than the former Wehrmacht set, and was equipped with an additional receiver and a plastic casing. No production figures were available.

Portable switchboard with 20 terminals: The unit could be combined with other switchboards to form a large set. The development project, ordered by the KVP Sea and the VPL, was started in 1951 and completed in early 1953. The work was carried out by Fernmeldewerk Leipzig. No information was obtained on any difficulties involved.

Mobile telephone exchange installed in a Horch 30 type truck. The station was equipped with a switchboard with 120 drop terminals, a decimeter transmitter and receiver, and a portable continuous tape recorder with Morse key. The development order was received from the VP Sea and the VPL.

Dispatcher Sets. No information available.

Section 2. Acoustics:

Electric megaphone. The development order, given to Funkwerk Dresden by the VP Sea in 1952, was postponed to 1954.

Cabin pressure loudspeaker for ships. In October 1954, the set was still being developed by the Kitzsche (fnu) and Demich (fnu) at Funkwerk Dresden. The trumpet shaped loudspeaker was equipped with airtight systems and a folded membrane in order to effect an increased acoustics radiation. The set was tested in "ostock with satisfactory results.

Magnetophone. The instrument designated "Reporter Gerat" was designed in two versions, a built-in set for a truck and a portable set to be combined with record player. The development order was received in 1952/1953 and the project was completed in 1954. The magnetophone was produced by the VAG for the KVP, VP Sea, VPL, SSD, the Ministry of Industry. It had been copied from the Western type but operated with tape instead of wire. The lack of roller parts and ball bearings hampered the production of the set. The set had been developed by Schmidt of the State Broadcasting Commission, Nalepastrasse, Berlin. As a result of poor designing, rejects had caused the production plant a deficit of 2.3 million eastmarks.

Loud Speaker. By government order, magnetic field rings of Hescho-Maniperm with a field strength of 600 Gauss were tested for loud speakers. Experiments with Western tubes were made with hearing aids and an electric organ.

Section 3. Broadcast and Television:

Consumer television sets. The major project was the development of television sets equipped with 17" picture tubes. Previously 12" - 14" sets had been used. Sachsenwerk Radeberg was in charge of the development project for which it consulted a development expert from the Sonata Plant as technical adviser. In mid-1954, a development team from Sachsenwerk Radeberg, along with the HV R-F-T, the development engineers of the Mark 100, and the adviser from the Sonata Plant had a conference. Work was then commenced.

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Radio spare part cars. The Annaberg Machine Factory developed one version for the KVP and another one for the VFL. The project was completed in June 1953. The equipment including cable drums, [redacted] and tools was produced by a plant in Jessen, Ester.

Waterproof transmitter and receiver elements. The Central Laboratory for Telecommunication Techniques in Treptow was in charge of the project which had been started in [redacted] of 1952 and was not completed by October 1954. The development [redacted] on former Wehrmacht models. The procurement and development of [redacted] resistant material was extremely difficult.

Perforated tape transmitter and receiver. The development, based on a former [redacted] model, was to be completed in the fourth quarter of 1954. [redacted] [redacted] of ZIF Treptow controlled the development. The system operated [redacted] of the quality of the paper. Difficulties were encountered with the supply of suitable coil steel.

Section 5. Transmitters:

Ten television transmitters. The big project had been ordered by the Deutsche Post. The transmitters were built by the HF Plant in cooperation with Sachsenwerk Radeberg and were to be completed by the end of 1954. The first two transmitters, delivered during the third quarter of 1953, were to be set up in the outskirts of Berlin.

Three 300-kW medium wave transmitters were being built for the Deutsche Post.

An improvised small transmitter station near Burg was to be transferred to the Neuruppin area after the completion of the 300-kW transmitter.

Two 200-kW transmitters. No information available.

One 100-kW transmitters. No information available.

Jamming Station. 120 jamming stations, called "Netzgeraet" (mains connected units) were being built by Stern Radio in Berlin Weissensee. Some of the stations had already been delivered and were in operation on the attics of apartment houses in Weissensee and Pankow. The frequency was wobbled by means of a variable capacitor. The range was not great and covered only the neighboring blocks. Experts in charge discussed experiments involving a modulation of the carrier frequency of the RIAS Berlin transmitter station. No details were obtained.

Section 6. Techniques:

[redacted] of the section who was informed on all [redacted] difficulties hampered the procurement of rare material (tungsten and molybdenum). These semi-finished products were obtained from West and brought over in small rolls by young boys to a liaison office located on Unter den Linden, opposite the Soviet Embassy. Western tubes were mostly used for the experiments, because the development of tubes in Germany was behind the instrument development.

Section 9. Structural Elements.

The development of component parts was also far behind the development of [redacted] which in turn were not designed for the material available. In order to eliminate the most serious bottlenecks, Western models were used, and attempts to copy those models were initiated. The rotating plate condensers were produced by Soemmerda Branch Plant of the Koellada Plant and by Radio Rochlitz. The condenser plates were shipped to the Berlin Mint (Munze) where they were rolled to tolerance measurement and subsequently returned to the plant. The mint had difficulties as a result of worn out rollers and the quality of the sheet metal was poor. The lack of foil materials caused a bottleneck of roll-type condensers. Aluminum foils were obtained from [redacted]

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Transistors were being developed by the Carl von Ossietzky Plant (Dralowid Plant) in Teltow under the supervision of Dr. ~~Walter Falter~~, chief of the research department. Dr Falter had demonstrated at the W. L. R. a tape recorder controlled by transistors and a small series of transistors for the computing machine developed by Ing Kutzsche. The development was hampered by the lack of funds.

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